

Message

From: Bowling, Linda [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=8B8B26EC739E403CA18F437E5F4E2613-BOWLING, LINDA]
Sent: 6/28/2022 2:55:59 PM
To: Wiser, Nathan [Wiser.Nathan@epa.gov]; Hall, Casey [Casey.Hall@meritenergy.com]
CC: Breffle, Don [Breffle.Don@epa.gov]; Wang, Gary [wang.gary@epa.gov]; Kittinger, Eric [Eric.Kittinger@meritenergy.com]; Owsley, T [T.Owsley@meritenergy.com]
Subject: RE: Questions on two plugging reports (Shoshone 65-41 and Shoshone 65-42)

I can be available during the times proposed below. Please do not delay any meeting for me. I can touch basis with my counterparts following any meeting if needed.

From: Wiser, Nathan <Wiser.Nathan@epa.gov>
Sent: Monday, June 27, 2022 12:31 PM
To: Hall, Casey <Casey.Hall@meritenergy.com>
Cc: Bowling, Linda <Bowling.Linda@epa.gov>; Breffle, Don <Breffle.Don@epa.gov>; Wang, Gary <wang.gary@epa.gov>; Kittinger, Eric <Eric.Kittinger@meritenergy.com>; Owsley, T <T.Owsley@meritenergy.com>
Subject: RE: Questions on two plugging reports (Shoshone 65-41 and Shoshone 65-42)

I could meet between 8:30 am and 11:00 am or between 1:30 pm and 3:00 pm Mtn time zone on Tues 6/28/22. Not sure we would have to include everyone from EPA on this email chain.

Nathan Wiser, Underground Injection Control Program

(he/his/him)

U.S. Environmental Protection Agency Region 8
1595 Wynkoop Street (mail code 8ENF-W-SD)
Denver, Colorado 80202

For UIC program information, visit our webpage <https://www.epa.gov/uic/underground-injection-control-epa-region-8-co-mt-nd-sd-ut-and-wy>.

From: Hall, Casey <Casey.Hall@meritenergy.com>
Sent: Monday, June 27, 2022 12:20 PM
To: Wiser, Nathan <Wiser.Nathan@epa.gov>
Cc: Bowling, Linda <Bowling.Linda@epa.gov>; Breffle, Don <Breffle.Don@epa.gov>; Wang, Gary <wang.gary@epa.gov>; Kittinger, Eric <Eric.Kittinger@meritenergy.com>; Owsley, T <T.Owsley@meritenergy.com>
Subject: RE: Questions on two plugging reports (Shoshone 65-41 and Shoshone 65-42)

Hey Nathan,

We can hop on a teams call tomorrow AM to discuss 65-42. We can get that "as-plugged" diagram corrected on 65-41 as well.

What time works best for you? I am free anytime after 8 MST.

Casey Hall

Merit Energy Company
13727 Noel Road, Suite 1200
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Office: (972) 628-1440

From: Wiser, Nathan <Wiser.Nathan@epa.gov>
Sent: Monday, June 27, 2022 12:56 PM
To: Hall, Casey <Casey.Hall@meritenergy.com>
Cc: Bowling, Linda <Bowling.Linda@epa.gov>; Breffle, Don <Breffle.Don@epa.gov>; Wang, Gary <wang.gary@epa.gov>; Kittinger, Eric <Eric.Kittinger@meritenergy.com>
Subject: RE: Questions on two plugging reports (Shoshone 65-41 and Shoshone 65-42)

EXTERNAL EMAIL

Hello Casey,

I'd like to have further discussion with you regarding Merit's deviation from the EPA-approved plugging procedure on the Shoshone 65-42 well. I also would like for Merit to revise the final "as-plugged" diagram for the Shoshone 65-41.

For these two wells, your 6/23/22 email response to my questions about the actual plugging indicated:

1. For the Shoshone 65-41 well, cement was discovered to be behind the 5.5" casing to the surface. The "as-plugged" diagram should reflect this if this is true.
2. For the Shoshone 65-42 well, the explanation that Merit was concerned about attempting to squeeze cement through newly-added perfs at approximately 200 feet based on lack of surface casing, age of well, and likelihood that pushing cement behind the 5.5" casing to the surface would be unsuccessful does not appear to have precluded Merit from revising its plugging plan to cut and pull this upper uncemented portion of the 5.5" casing followed by setting a cement plug from the cut-point to the surface. From EPA's comments on the plan it seems clear that the objective was to place cement into this uncemented annulus or find a way to set a cement plug across this uncemented portion of the well, so as to ensure no fluid movement behind the uncemented 5.5" would be likely.

Do you have some time to talk further about this matter? I am happy to schedule a MS Teams meeting with you.

Thank you.

Nathan Wiser, Underground Injection Control Program
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Denver, Colorado 80202

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From: Hall, Casey <Casey.Hall@meritenergy.com>
Sent: Thursday, June 23, 2022 9:48 AM
To: Wiser, Nathan <Wiser.Nathan@epa.gov>
Cc: Bowling, Linda <Bowling.Linda@epa.gov>; Breffle, Don <Breffle.Don@epa.gov>; Wang, Gary <wang.gary@epa.gov>; Kittinger, Eric <Eric.Kittinger@meritenergy.com>
Subject: RE: Questions on two plugging reports (Shoshone 65-41 and Shoshone 65-42)

Good Morning Nathan,

Eric forwarded me your message and I hope to clarify these two subject wells.

65-41

While on the well, we discovered that the 5.5" production casing did have cement to surface instead of the calculated 432' to surface in the procedure. The 4.5" (Liner) was cemented during the actual plugging job.

65-42

During the actual plugging, the procedure was changed from perforating the 5.5" production casing at 200' and circulating the cement to surface. Inside 5.5" wellbore was cemented from 219' to surface. There were two main concerns: being able to circulate to surface due to the fact that the well did not have an external barrier (surface casing) and the 2nd was making a future most susceptible entry point of contamination at the squeezed perforation. The well was drilled in 1954 and being able to circulate outside of the 5.5" in the 68 year old drilling mud would have been difficult at best, if possible at all.

With regards due to the lack of communication between Merit and EPA on these two, Merit did not attempt to contact the EPA on these due to not knowing these were EPA wells at the time and also based on the remote location of the field. There was also some miscommunication between the field and myself on any procedural changes on these due to myself being out of the office. We have tried to increase the awareness of which wells are EPA vs. BLM wells going forward after these for example the wells from last week. Out of the 50 wells that we are plugging in Circle Ridge, 7 of them are the EPA wells. Since the BLM has been on location on every well we plugged thus far, Merit and the BLM has tried to approach any procedural changes with the most successful plan to not only plug the well but to protect against any subsurface groundwater contamination.

If you have any more questions or concerns, please reach out. I am in the field this week, so I will have my cell phone with me.

Thanks and have a great day!

Casey Hall

Merit Energy Company
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From: Kittinger, Eric <Eric.Kittinger@meritenergy.com>
Sent: Tuesday, June 21, 2022 1:51 PM
To: Hall, Casey <Casey.Hall@meritenergy.com>
Subject: FW: Questions on two plugging reports (Shoshone 65-41 and Shoshone 65-42)

See below the questions EPA has on two of the plugged injection wells.

Eric Kittinger
Senior Regulatory Analyst
Merit Energy Company
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512-554-8093 (Mobile)

From: Wiser, Nathan <Wiser.Nathan@epa.gov>
Sent: Tuesday, June 21, 2022 2:47 PM
To: Kittinger, Eric <Eric.Kittinger@meritenergy.com>
Cc: Bowling, Linda <Bowling.Linda@epa.gov>; Breffle, Don <Breffle.Don@epa.gov>; Wang, Gary <wang.gary@epa.gov>
Subject: Questions on two plugging reports (Shoshone 65-41 and Shoshone 65-42)

EXTERNAL EMAIL

Eric,

I have received and reviewed four plugging reports you sent (three from you on 6/7/22 and one on 6/21/22). Of these four, two have issues I want to better understand. See below.

Shoshone 65-42 well (EPA Well ID WY20000-02182):

The approval EPA granted to plug this well included specific steps (see procedure, steps 8 and 9). These steps planned adding perforations through the 5.5" casing at 200 feet depth and pumping cement through this casing to the surface, in order to fully cement this uncemented portion of the well. Adding this cement would have provided better assurance of precluding fluid movement behind the 5.5" casing into or between underground sources of drinking water. The daily rework records indicate these steps were replaced after consulting with BLM. The replacement steps included balancing a cement plug inside the 5.5" casing, cutting off the 5.5" casing 3 feet below ground, and adding 10 more cement sacks inside the 5.5" casing. This final as-plugged condition leaves the annulus between the 5.5" casing the well borehole still uncemented from surface to 362 feet. A lack of surface casing was cited as a reason for the change. I don't understand how lack of surface casing precludes the original steps.

Shoshone 65-41 well (EPA Well ID WY20000-02179):

The approval EPA granted to plug this well included specific steps (see procedure, steps 8 and 9). These steps planned adding perforations through the 5.5" casing and 4.5" liner at 400 feet depth and pumping cement through these casing strings to the surface, in order to fully cement this uncemented portion of the well. Adding this cement would have provided better assurance of precluding fluid movement behind the 5.5" casing into or between underground sources of drinking water. The daily rework records indicate these steps were replaced after consulting with BLM. The replacement steps included balancing a cement plug inside the 5.5" casing, cutting off the 5.5" casing 3 feet below ground, and adding 5 more cement sacks inside the 5.5" casing. This final as-plugged condition leaves the annulus between the 5.5" casing the well borehole still uncemented from surface to 432 feet. A lack of surface casing was cited as a reason for the change. I don't understand how lack of surface casing precludes the original steps.

QUESTION: Can you please explain the rationale, rooted apparently in the lack of surface casing in each well, for making these changes during the actual plugging? These avoided steps were specifically included in the procedures written by Merit's engineers and approved by the EPA. Did Merit attempt to contact the EPA during plugging to discuss whether these changes could be approved? Although I was not working on 6/6/22, the date this deviation occurred at the Shoshone 65-41 well, I was working on 6/2/22, the date this deviation occurred at the Shoshone 65-42 well. Further, there are others here at EPA who could have assisted with this matter in my absence. I attach the original 4/5/22 EPA approval for plugging these wells as well as minor changes approved by EPA on 6/3/22.

Thank you.

Nathan Wiser, Underground Injection Control Program

(he/his/him)

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